

Application No. 10/050,711
Response to Office Action dated October 27, 2003
Reply to Office Action of September 10, 2003

AMENMDMENT TO THE CLAIMS

1. (Presently Amended) A (meth)acrylate composition comprising

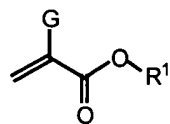
a (meth)acrylate component; and

a dye substantially dissolved in said (meth)acrylate component which imparts a first color to said (meth)acrylate component, wherein upon curing, a resultant cured composition has a second color, and wherein said dye comprises xanthene dyes, and optionally, anthraquinone dyes, wherein said xanthene dye is selected from the group consisting of fluorescein, dibromofluorescein, diiodofluorescein, tetrabromofluorescein, tetraiodofluorescein, tetrabromotetrachlorofluorescein and combinations thereof.

2. (Original) The composition of Claim 1, wherein upon curing, the resultant cured composition is substantially free of the first color.

3. (Original) The composition of Claim 1, wherein said (meth)acrylate component comprises one or more members selected from the group consisting of

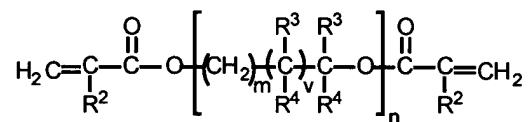
a monomer represented by the formula:



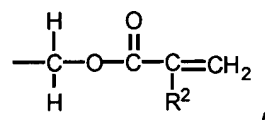
wherein G is hydrogen, halogen, or an alkyl having from 1 to 4 carbon atoms, R¹ has from 1 to 16 carbon atoms and is an alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkaryl, aralkyl, or aryl group, optionally substituted or interrupted with silane, silicon, oxygen, halogen, carbonyl, hydroxyl, ester, carboxylic acid, urea, urethane, carbamate, amine, amide, sulfur, sulfonate, or sulfone;

a di- or tri- (meth)acrylate comprising polyethylene glycol di(meth)acrylates, bisphenol-A di(meth)acrylates, tetrahydrofuran di(meth)acrylates, hexanediol di(meth)acrylate, trimethylol propane tri(meth)acrylate, or combinations thereof; and

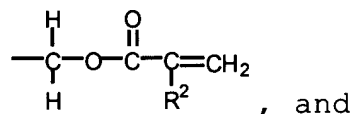
an acrylate ester represented by the formula:



wherein R² is hydrogen, halogen, or an alkyl having about 1 to about 4 carbon atoms, R³ is hydrogen, an alkyl having about 1 to about 4 carbon atoms, hydroxyalkyl having about 1 to about 4 carbon atoms or

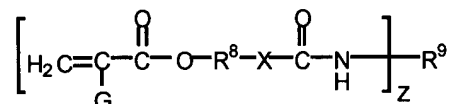


R⁴ is hydrogen, hydroxy or



m is 1 to 8, n is 1 to 20, and v is 0 or 1.

4. (Original) The composition of Claim 1, wherein said (meth)acrylate component comprises urethane acrylates or ureide acrylates represented by the formula:



wherein

G is hydrogen, halogen, or an alkyl having from 1 to 4 carbon atoms;

R⁸ denotes a divalent aliphatic, cycloaliphatic, aromatic, or araliphatic group, bound through a carbon atom or carbon atoms thereof indicated at the -O- atom and -X- atom or group;

X is -O-, -NH-, or -N(alkyl)-, in which the alkyl radical has from 1 to 8 carbon atoms;

z is 2 to 6; and

R⁹ is a z-valent cycloaliphatic, aromatic, or araliphatic group bound through a carbon atom or carbon atoms thereof to the one or more NH groups.

5. (Original) The composition of Claim 1, wherein said (meth)acrylate component comprises polyethylene glycol di(meth)acrylates, bisphenol-A di(meth)acrylates, tetrahydrofuran (meth)acrylates and di(meth)acrylates, citronellyl acrylate and citronellyl methacrylate, hydroxypropyl (meth)acrylate, hexanediol di(meth)acrylate, trimethylol propane tri(meth)acrylate, tetrahydrodicyclopentadienyl (meth)acrylate, ethoxylated trimethylol propane triacrylate, triethylene glycol acrylate, triethylene glycol methacrylate, and combinations thereof.

6. (Cancelled)

7. (Cancelled)

8. (Original) The composition of Claim 1, wherein said dye is present in an amount of about 50 ppm to about 1000 ppm based on the amount of said (meth)acrylate component.

9. (Original) The composition of Claim 1, wherein said dye is present in an amount of about 100 to about 200 ppm based on the amount of said (meth)acrylate component.

10. (Original) The composition of Claim 1, wherein said dye comprises tetraiodofluorescein.

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11. (Original) The composition of Claim 1, further comprising a member selected from the group consisting of stabilizers, accelerators, fillers, opacifiers, thickeners, viscosity modifiers, adhesion promoters, inhibitors, thixotrophy conferring agents, tougheners, anti-oxidizing agents, anti-reducing agents, and combinations thereof.

12. (Original) An adhesive composition comprising the (meth)acrylate composition of Claim 1; and a member selected from the group consisting of stabilizers, accelerators, fillers, opacifiers, thickeners, viscosity modifiers, adhesion promoters, inhibitors, thixotrophy conferring agents, tougheners, anti-oxidizing agents, anti-reducing agents, and combinations thereof.

13. (Original) The composition of Claim 12, wherein said dye is a member selected from the group consisting of fluorescein, dibromofluorescein, diiodofluorescein, tetrabromofluorescein, tetraiodofluorescein, tetrabromotetrachlorofluorescein, and combinations thereof.

14. (Original) The composition of Claim 12, wherein said dye comprises tetraiodofluorescein.

15. (Original) A method of making a cured composition comprising the steps of

providing the (meth)acrylate composition of Claim 1;
and
curing the composition to form a cured composition
having a second color.

16. (Presently Amended) The method of Claim 15,
wherein prior to the step of curing the (meth)acrylate
component, the (meth)acrylate component has a [fluorescent]
first color which is fluorescent.

17. (Presently Amended) The method of Claim 15,
wherein after the step of curing the (meth)acrylate component,
the cured composition is substantially free of the first color
[and fluorescence].

18. (Original) The method of Claim 15, wherein the
dye is a member selected from the group consisting of
fluorescein, dibromofluorescein, diiodofluorescein,
tetrabromofluorescein, tetraiodofluorescein,
tetrabromotetrachlorofluorescein, and combinations thereof.

19. (Original) The method of Claim 15, wherein the
step of curing comprises photocuring.

20. (Presently Amended) A method of detecting
substantially full cure of an adhesive comprising the steps of
providing a first article and a second article;

providing, on a surface of the first article, the
(meth)acrylate composition of Claim 1; and

contacting a surface of the second article to the
surface of the first article having the [adhesive]
(meth)acrylate composition thereon;

exposing the first and second articles to cure
conditions[; and

detecting the absence of fluorescence of the
adhesive].

21. (Presently Amended) The method of Claim 20,
wherein in the step of providing a [fluorescent adhesive]
(meth)acrylate composition comprising a (meth)acrylate component
and a [fluorescent] dye, the dye is selected from the group
consisting of fluorescein, dibromofluorescein,
diiodofluorescein, tetrabromofluorescein, tetraiodofluorescein,
tetrabromotetrachlorofluorescein, and combinations thereof.

22. (Original) The method of Claim 20, further
including the step of detecting the absence of the first color
after exposing the first and second articles to cure conditions.

23. (Presently Amended) A method of assembling and
inspecting a series of articles having an adhesive bond line
comprising the steps of

adhering two or more parts of an article together with the (meth)acrylate composition of Claim 1, wherein an adhesive bond line is formed between the parts of the article; and

exposing the article to cure conditions[; and detecting the absence of fluorescence of the (meth)acrylate composition at the bond lines as an indication of substantially full cure].

24. (Presently Amended) The method of Claim 23, wherein in the step of adhering two or more parts of an article together with [a fluorescent adhesive] the (meth)acrylate composition, the [fluorescent adhesive] (meth)acrylate composition has a first color.

25. (Presently Amended) The method of Claim 24, further including the step of detecting the absence of the first color after exposing the article to [adhesive] cure conditions.